

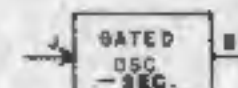
EC 437

172437

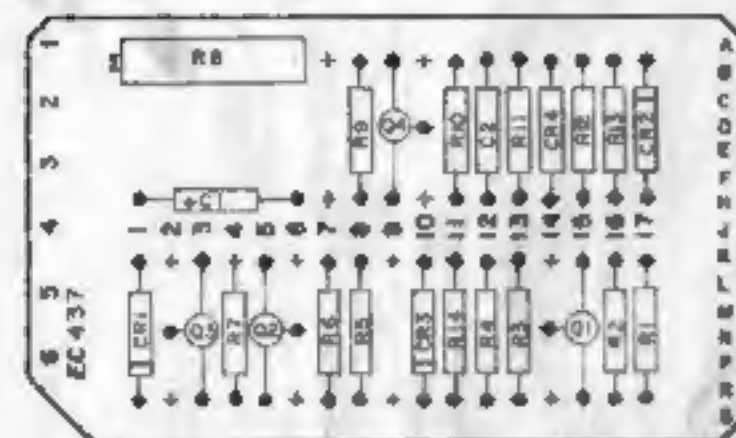
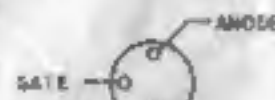
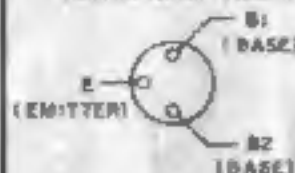
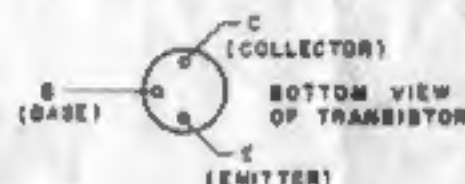
GATED OSCILLATOR  
2 TO 6 SECS.

## CIRCUIT BOARD EC

## SYMBOLS



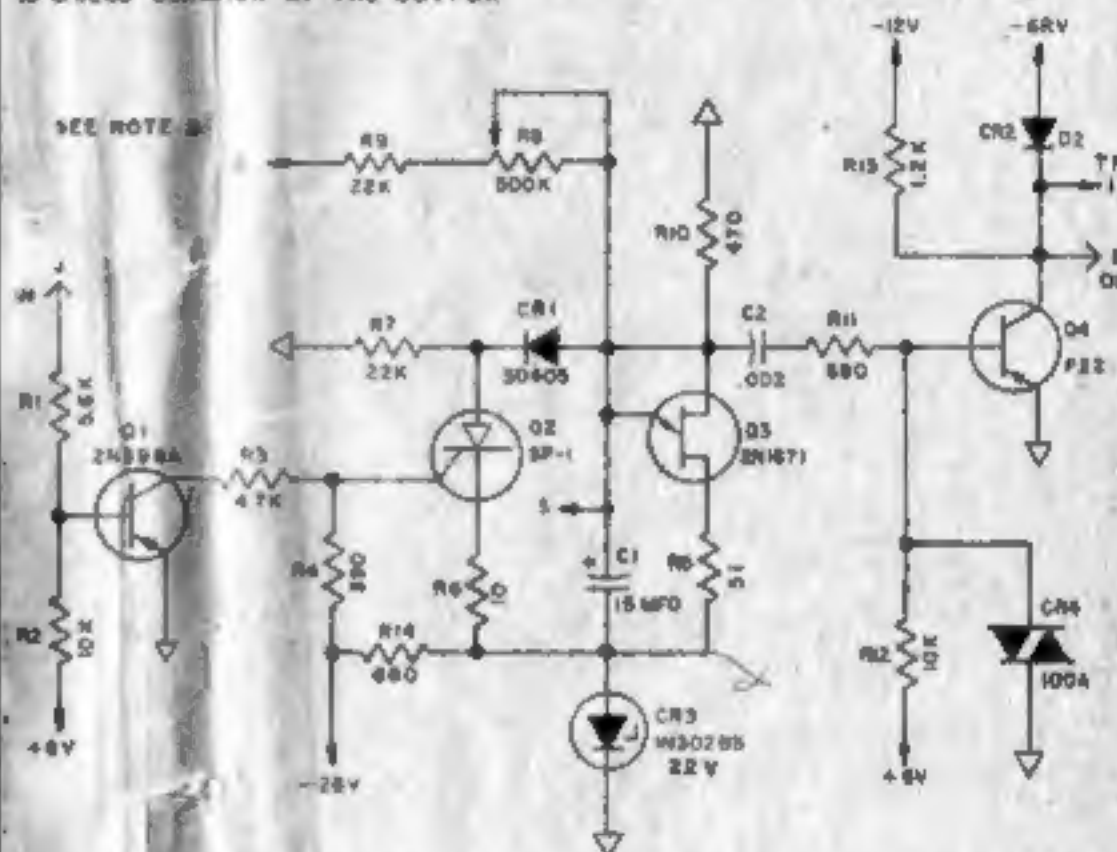
DATE	DATE	AUTH NO

BOTTOM VIEW OF  
UNIUNCTION TRANSISTORBOTTOM VIEW OF  
SILICON-CONTROLLED  
RECTIFIER

NOTE:  
REFER TO 500015 FOR MARKING  
INFORMATION

REF DESIGN	TELETYPE PART NO.	TOTAL QTY	NAME AND DESCRIPTION	LOCATING FUNCTION
C1	500027	1	Capacitor - TANTALUM 15 MFD	Timing
C2	177332	1	Capacitor - .002 MFD	Coupling
CR1	177109	1	Diode 50405	Gate
CR2	177108	1	Diode D2	Clamp
CR3	500017	1	Zener Diode 22 Volts 1W	VOLTAGE REGULATOR
CR4	178844	1	VARISTOR	BASE Bias
R1	118186	1	Resistor Fixed 5.1K OHM	Base Load
R2	118180	2	Resistor Fixed 10K	Base Bias
R3	118145	1	RESISTOR FIXED 47K OHM	Gate Input
R4	143662	1	Resistor Fixed 390	Gate Bias
R5	143656	1	Resistor Fixed 51	Base 1 Load
R6	171468	1	Resistor Fixed 10	Cathode Load
R7	118177	2	Resistor Fixed 22K	Anode Load
R8	500022	1	Resistor Variable 500K	Timing
R9			Same as R7	Timing
R10	137852	1	Resistor Fixed 470	Base 2 Load
R11	129850	2	Resistor Fixed 580	Base Input
R12			Same as R2	Base Bias
R13	137641	1	Resistor Fixed 1.2K	Collector Load
R14			SAME AS R11	CURRENT LIMITING
Q1	177224	1	Transistor 2N1984	Control
Q2	177100	1	Silicon Controlled Rect.	SP-1 Control
Q3	177610	1	Transistor Uniunction 2N1671	Oscillator
Q4	177105	1	Transistor P22	Amplifier
EC	500015	1	Circuit Card, Ratched	

This circuit operates as a gated oscillator. It consists of four main parts: Input control transistor Q1, Oscillator control SCR, Q2, Oscillator unijunction Transistor, Q3, and Output Transistor Q4. The input control transistor which operates on a -6 volt and 0 volt signal, supplies the necessary current and voltage to fire the oscillator control SCR, Q2. The SCR will conduct until the timing capacitor C of the oscillator is completely discharged, unless gate current to the SCR is continuously being supplied. The condition for oscillation is that the SCR must not be conducting. The period of oscillation is dependent on the timing resistor R8, 250K and will vary from .2 to 6 SECS. Negative going pulses appearing at the base of Q4 are inverted and appear as a -6 TO 0 VOLT PULSE OF APPROXIMATELY 10 USECS DURATION AT THE OUTPUT.



## NOTE:

1. Card connections are represented by letters test points are represented by numbers.
2. Terminal C may be connected to an external variable resistor to ground. Terminal C should be connected to ground if external variable resistor is not used.



## APPROVALS

O AND R E SP M

S NUMBER

PROD NO 172437

DATE 12-17-62

PG FILE NO B-A 555.215A

DRAWN P.K. CHED 13

ENGR E.H.P. SPED 13

TELETYPE  
CORPORATION

H. Petersen